2.0 METHODS

For the purpose of this investigation, the boundary of the study area was selected to be approximately one mile from the edge of the coal lease (see Figure 1). The study area extended from Horse Canyon on the north to Mill Canyon on the south and from Bald Ridge on the west to a distance of approximately one mile from the lease boundary on the east.

A literature search was conducted prior to conducting the field work to provide general information on the descriptions and locations of the major geologic units. In addition, data collected from previous seep and spring surveys conducted in 1985 for the Crandall Canyon Mine of Genwal Coal Company were utilized in developing the pre-investigation baseline data. The study area was then traversed on horseback and on foot to allow springs and seepage points to be precisely located, examined, and sampled.

Geologic conditions at all seeps and springs were noted in the field, including lithologic and structural controls and the geologic formation from which the seepage issued. Signs of usage were also noted. The flow was measured if under five gallons per minute and visually estimated if greater than five gallons per minute. A sample of the water was collected (if sufficient water was present) and the temperature of the water issuing from the spring was measured at the site. All samples were analyzed in the field for pH and specific conductance.

Due to the steep, often inaccessible, and sometimes heavily vegetated nature of the study area, it is possible that a limited number of seeps and springs at the site were not found during the inventory. In several cases, areas which appeared to produce water a few months during the year were dry during the inventories. However, the seeps and springs that were found are considered representative of local conditions.

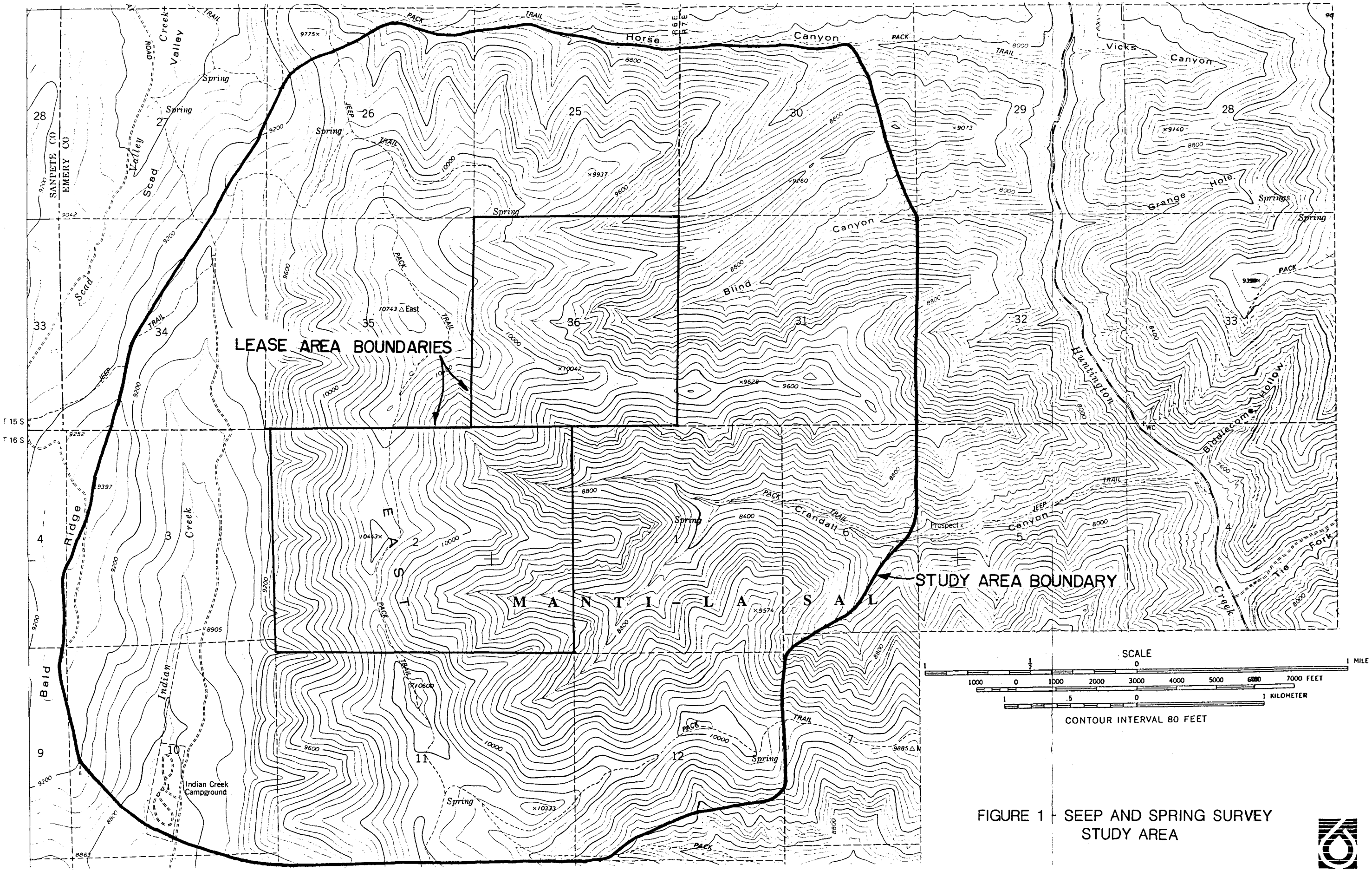

FIGURE 1 - SEEP AND SPRING SURVEY STUDY AREA

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